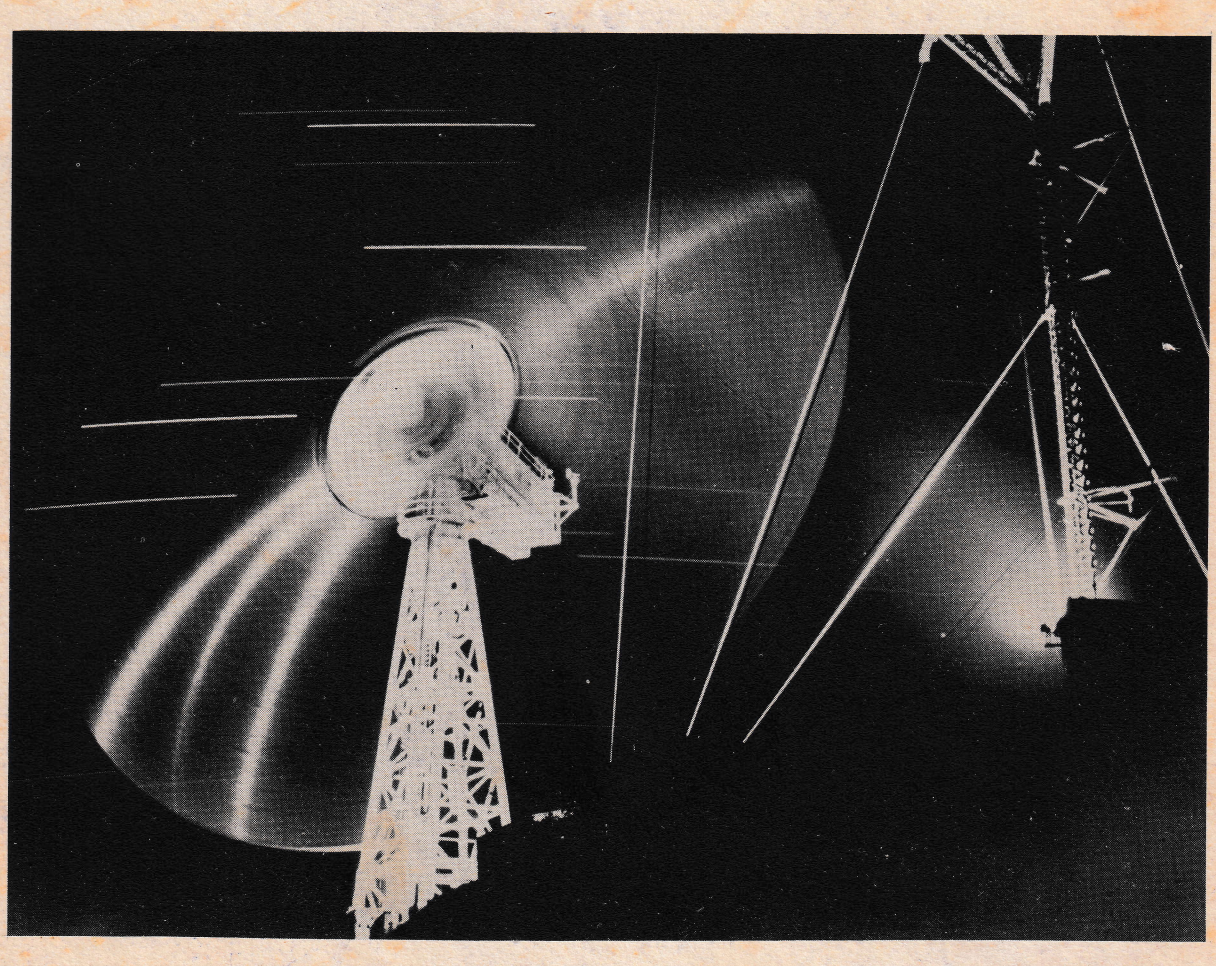
Turbine Topics

Vol. 1 No. 3 Issued For and By the Employees of S. Morgan Smith Co. June, 1943



Night Wind

THE SMITH-PUTMAN WIND TURBINE

"A Step Forward In Aero-Electric Power Research"

SEE PAGE 3 FOR FEATURE ARTICLE

FELLOW WORKERS:

We are using an important part of this issue of "Turbine Topics" for the purpose of acquainting you with the pertinent facts pertaining to the invention, design, manufacture, installation and testing of the Smith-Putman Wind Turbine. The development of this turbine represents not only by far the greatest venture in the field of research which this company has ever attempted, but by its magnitude and the audacity of its conception, one of the outstanding research projects of modern history. The operation of the unit to date and the information gained in connection therewith have, we are happy to report, made us most sanguine as to the successful future of wind power.

As important as this particular venture may be, it is but a manifestation of a policy of conducting constant research which was initiated by the founder of our company and vigorously pursued throughout its entire corporate history.

Our engineers and designers are constantly seeking improvements in our current products. They, in conjunction with Management, are also at all times looking for new products invented or developed outside of our own organization, which may profitably be manufactured by us, such as the Roller Dam, Bascule Gate, Howell-Bunger Valve, Rotovalve and Kaplan Turbine.

It is by this same spirit of insatiable curiosity and the desire for improvement which research represents, coupled with courage to accept risks, that has enabled American Business to achieve its unmatched record of progress during the past century. This progress, however, could never have been attained except under a system of Free Labor and Free Enterprise. It is my sober opinion and profound hope that we are standing on the threshold of an era of undreamed of technological development with a consequent heightened standard of living and social progress, which can only be realized through a continuation of our American system of Free Individual Enterprise.

Sincerely yours,

Burwell B. Smith

BURWELL B. SMITH,
Vice-President.

THE SMITH-PUTMAN WIND TURBINE . . .

A Step Forward In Aero-Electric Power Research

By Grant H. Voaden
Asst. Chief Engineer of the Project

Our company, always in the lead in hydro-electric developments, has been experimenting for the past three years on a new type of unit—an aero-electric unit. Just as a hydro-electric unit consists of a hydraulic turbine driving a generator, so an aero-electric unit is comprised of a wind turbine and a generator.

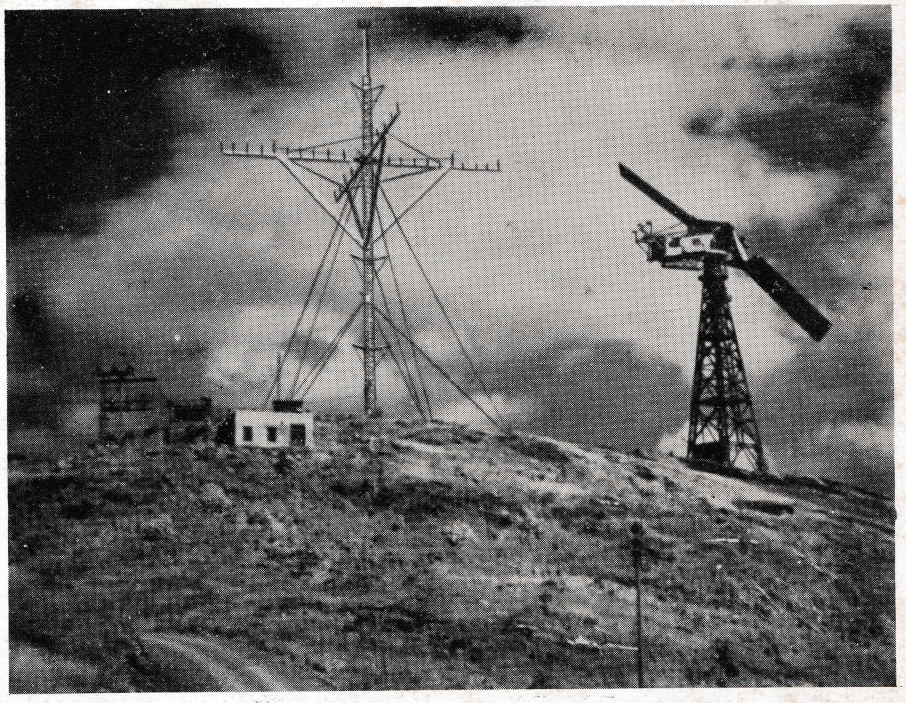
While some of the experimenting done in the early stages was on small scale wooden models made by our pattern shop, it was necessary to have a full scale unit of large dimensions in order to determine whether the project was feasible from a commercial standpoint. For this purpose the building of such a unit was undertaken and on October 19, 1941, for the first time in history an aero-electric unit was synchronized with, was connected to and delivered power to a commercial, alternating current power system. The photograph on the cover shows the unit in operation at night, the stars appearing as horizontal streaks because of the earth's rotation during the time of exposure. This experimental unit is located on the top of a bare mountain known as Grandpa's Knob, near Rutland, Vermont, and is now owned and operated by the Central Vermont Public Service Corporation.

The inventor of the wind turbine, P. C. Putnam, a Boston engineer, now in our country's service, proposed this project to the Management of our company late in the year 1939. After considerable preliminary study by some of our engineers, aided by consultants such as Dr. Theodore von Karman, Director, Guggenheim Aeronautics Laboratory, California Institute of Technology, Dr. S. Petterssen, Aerology Expert of Massachusetts Institute of Technology, now connected with the Norwegian Air Force in England, Dr. John B. Wilbur, Professor of Civil Engineering at M. I. T., and others, the company decided to take up the project. It further decided that the units should be known as Smith-Putnam Wind Turbines and that a test unit should be built of 1,000 K. W. rated capacity, and a blade spread tip to tip of 175 ft.

The fundamental basis of the company's interest was the fact that wind power can be used as an auxiliary to water power. Wind power by itself is not prime power; that is, it is not available all the time. A wind of about 20 M.P.H.* is required before any appreciable amount of usable power can be developed. Since sometimes the wind velocity is below this figure there must be other sources of power available to supply the full demand. However, if aero-electric units are added to an existing power system supplied by hydro-electric units or steam driven units or both, then whenever there is sufficient wind a certain number of hydro or steam units can be idled or shut down thereby allowing water to be stored above the dam or coal to be saved.

In the early spring of 1940 Dr. Wilbur accepted the position of

* This figure can be reduced on future units, depending on the wind regime at the site for which the turbines are built.



Smith-Putman Wind Turbine installation on Grandpa's Knob near Rutland, Vt., for Central Vermont Public Service Corp. Tower height, 110 ft., weight 125 tons. Blades 175 ft. tip to tip, speed at tip 263 ft. per second. Weight aloft 240 tons. Mast for anemometers in center to measure wind velocity. Concrete control house, transformers and transmission line to Rutland. Capacity 1,000 K. W.

THIS IS THE WAY THE WIND TURBINE LOOKS coming up the path from the control house. How would you like to be up there with "Rosie" Rozell?

Chief Engineer of the Project and an engineering force was organized under his direction. Due to the large amount of work in our own plant, the need for speed due to a number of conditions, and the specialized nature of the various phases of the project, it was necessary to have the design and construction of the unit proceed at the same time, and to have the work done by outside concerns. The design and building of practically all the machinery mounted at the top of the tower, with the exception of the blades themselves, was by The Wellman Engineering Company of Cleveland, Ohio. For a few months a staff of over 150 engineers and designers were working full time on the drawings alone. The blades, which are of stainless steel and shaped like the wings of a bomber, were designed and constructed by Budd Manufacturing Company, Philadelphia. The tower on which the turbine proper is mounted and the anemometer mast as well were fabricated of structural steel and were erected at the site by the American Bridge Company of Ambridge, Pa. The generator and all of the switchgear were designed and furnished by the General Electric Co. Published herewith is a photo of the complete aero-electric test unit installation on Grandpa's Knob. You see the turbine itself mounted on a structural steel tower 110 ft. high, the concrete control house containing switchboards and instruments for remote control and observation, the transformers and poles for the power line, all of which comprise the station proper. The skeleton-like structure in the center supports anemometers to measure wind velocity and would not be necessary in a purely commercial installation. It is a significant feature from the economic standpoint that the above principal component parts do comprise the entire installation, whereas in a hydro-electric plant it is necessary in addition to have a large dam and power house with expensive auxiliary equipment such as penstocks, head gates, valves, cranes, etc. Then too wind turbines have the advantage that the land which a battery of say 20 units would occupy would be of little value for other purposes, whereas the land area flooded by a dam is usually quite extensive and sometimes of relatively high value.

THESE MEN have just completed a thorough inspection of the stainless steel blade skin.

The turbine proper, which is mounted on the tower, is swung about a vertical shaft by a hydraulic motor and gearing in accordance with changes in wind direction so that the turbine shaft is always in line with the wind direction and the blades downwind of the tower. This motion is called "yawing." The rotation of the turbine about its main shaft axis is right-hand when looking at the turbine with one's back to the wind.

The pitch of the blades themselves, which are only two in number, is changed automatically by a mechanism similar to that on a Kaplan turbine to maintain practically constant speed of rotation regardless of wind velocity. Up to about 18 M.P.H., however, the wind is not high enough to make the turbine rotate at full speed. When that velocity is exceeded the generator is connected to the system and as the wind velocity further increases the turbine gives more and more power without any change in blade pitch until at 30 M.P.H. it has reached the 1,000 K.W. rating of the generator. Beyond this velocity the blades are pitched automatically in response to a Woodward governor to keep from overspeeding and overloading the unit.

Another motion of the turbine is "coning." The blades can move up and downwind pivoting on hinges at the hub under restraint of a damping mechanism. This is to provide some "give" to the mechanism in severe gusts of wind; that is, when the wind either increases or decreases suddenly.

The generator is mounted aloft at the upwind end of the pintle girder and operates at 600 R.P.M., 2,400 volts, 60 cycles, being driven through gears which step up the turbine speed from 28.7 R.P.M. Interposed between these gears and the generator is a hydraulic coupling, similar in principle to a "fluid drive"; its

LEFT TO RIGHT: C. J. Wilcox, P. C. Putman, the inventor, G. A. Jessop, B. E. Smith, Llewellyn Evans, W. P. B., S. D. Dornbirer, J. B. Wilbur, C. L. Avery, Woodward Governor Co., M. G. Dow, Central Vermont public Service Corp., M. J. Holley, Jr.

WIND TURBINE WITH BLADES "FEATHERED." From ground to tip of upper blade in this position is about 205 ft.

J. B. Wilbur, Chief Engineer of the Project; Grant H. Voaden, Asst. Chief Engineer of the Project; George A. Jessop, Chief Engineer of the S. Morgan Smith Co.

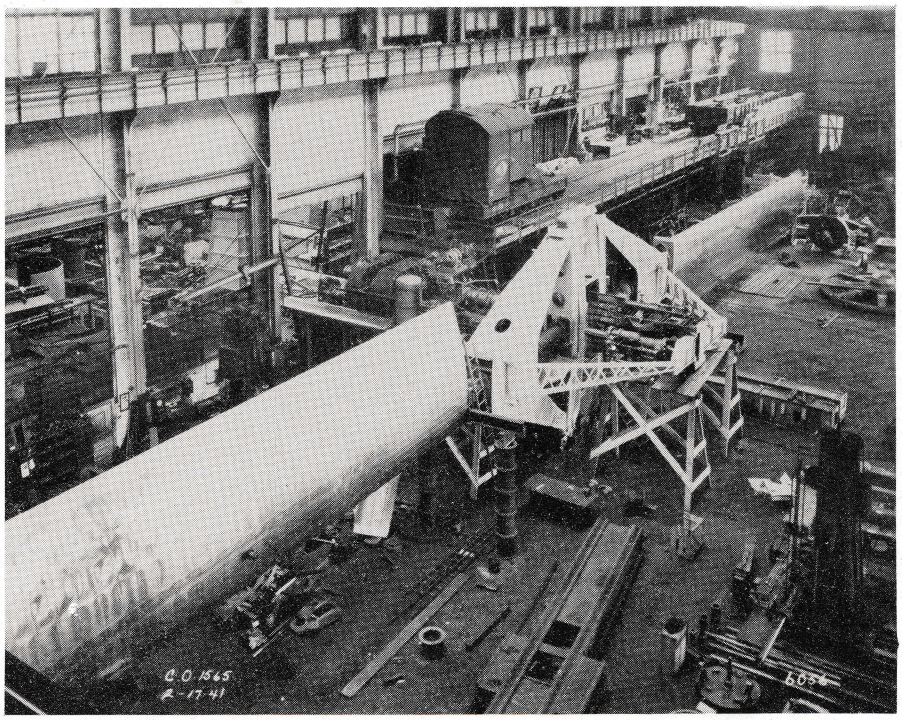
purpose being to allow a certain amount of "slip" or difference in speed between the high speed side of the gears and the generator itself. At zero load this slip is negligible and the two halves of the coupling rotate at the same speed, but as the load on the generator is increased it is necessary to rotate the driving half coupling faster and faster to overcome the slip until at 1,000 K.W. output its speed is 625 R.P.M. while the generator speed is still 600 R.P.M. While this represents a loss it is necessary for two reasons: primarily to provide means for the loading and unloading of the unit by changing the speed adjustment of the governor and, secondly, to provide a cushion between the turbine and generator to take up shocks due to extremely severe gusts which frequently occur and which otherwise would cause the generator to be thrown off the line due to overload.

The normal control of the unit is completely automatic, even to the phasing with the system, and it functions without attendance. Manual control is also provided. The unit can be operated completely from the control house several hundred feet from the base of the tower and partially from aloft. This feature is particularly desirable on this first unit for testing purposes.

This project involves a great many fields of engineering knowledge and endeavor; for example, aerology, aerodynamics, mechanics, structural and electrical engineering, to name only a few. Also in the production of these units every type of worker will find a job—pattern makers, boiler makers, welders, pipe fitters, machinists, electricians and mechanics—all are needed. Some of the pictures on these pages illustrate the different types of shop work that are involved in the manufacture of a wind turbine. It is confidently expected that some day—and it may not be so long—many more wind turbines will be built right here in our own plant and built from drawings made by our own designers.

As was naturally to be expected in a new machine of such magnitude involving so many novel features, frequent troubles developed which were eventually overcome in the two years since erection was first started. However, the unit has proven itself fundamentally sound and practical. Mechanically it is as satisfactory as

Stanton D. Dornbirer, Supt. at Erection; Ella Taranovich; Carl J. Wilcox, Office Manager and Test Engineer; Mary Skaza, Myle J. Holley, Jr., Test Engineer; and Arthur H. Cheney who works in our Rutland office.

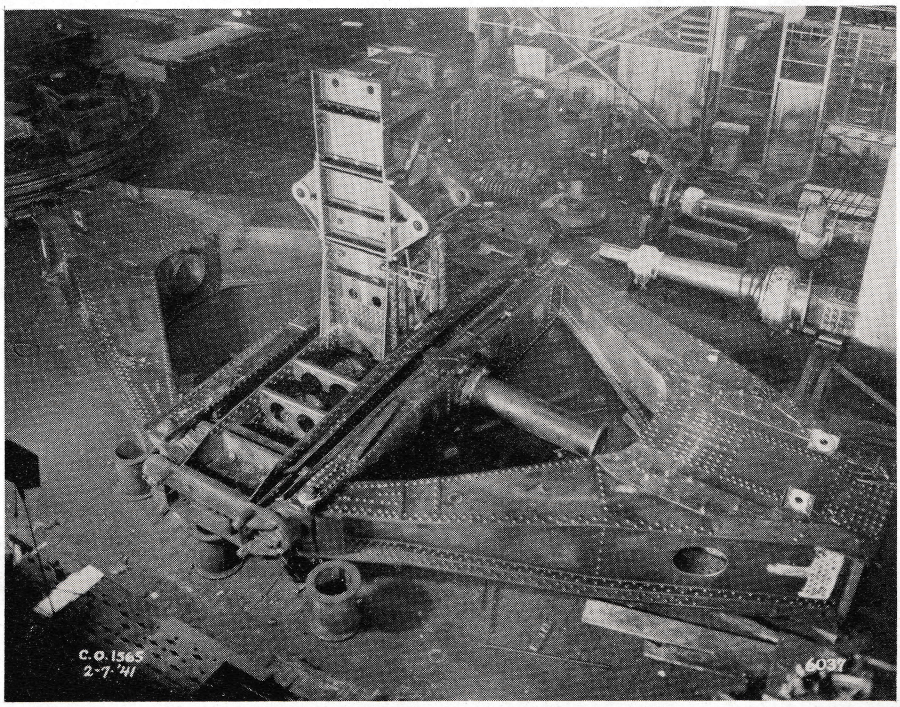


SHOP ASSEMBLY NEARING COMPLETION in Wellman Engineering Shop, stainless steel blades in position to give maximum power. Note provisions for "coning" of blades up and downwind in gusts, and cylinders and struts for damping the motion.

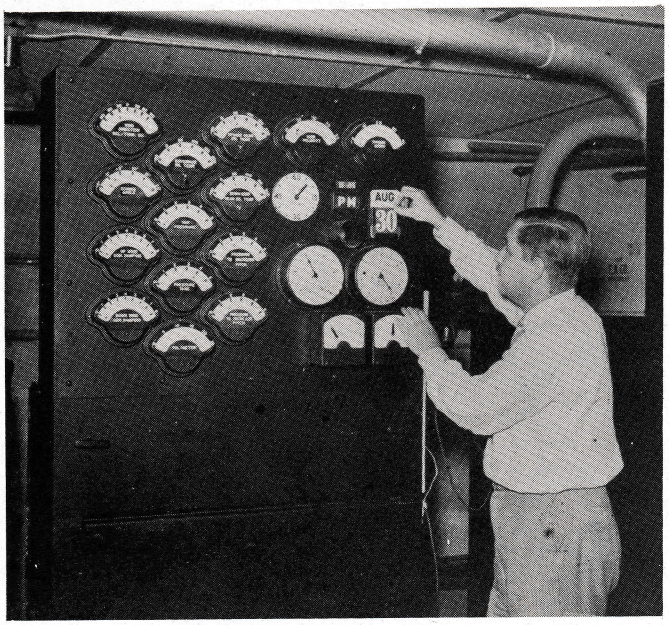
ERNEST STUMP, Machinery Erection Foreman.

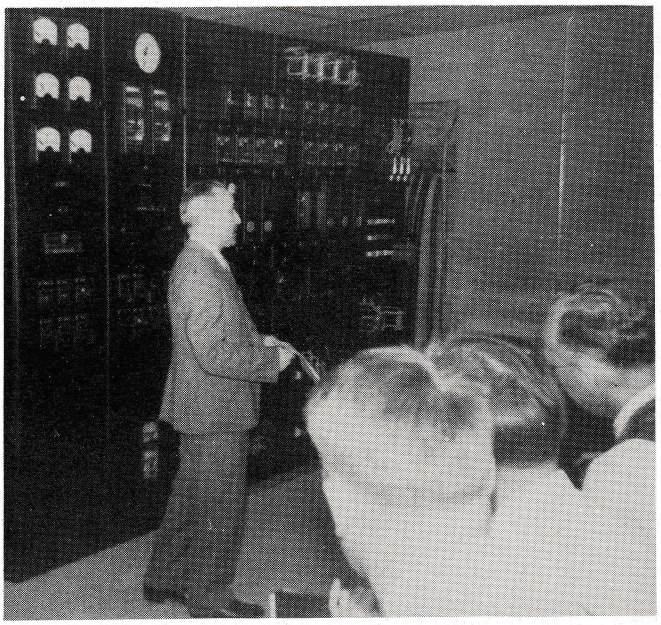
HAROLD S. PERRY, Steel Work Erection Foreman.

could be expected with an entirely new design having no basis of past experience. The knowledge gained during the process of bringing this unit to a state of successful operation will enable us to design a production unit which should not only be much improved mechanically, but also be capable of producing power on an economically competitive basis in areas with suitable wind regimes.



ASSEMBLY OF TAILPIECE HUB, A-frame and torque tubes (for pitching the blades). Production Units will have Welded construction, not riveted.

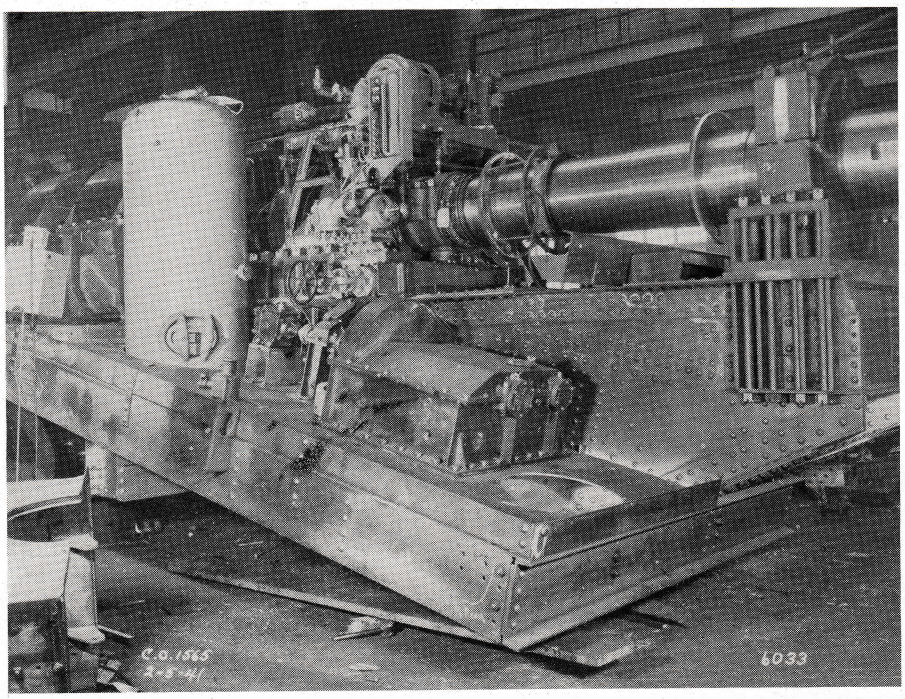




The views above taken inside the control house show on the left the instrument panel which is special for the test unit, and on the right the switchboard.

The eighteen instruments on the test panel indicate the functioning of various parts of the unit, which itself is several hundred yards away, and also the wind velocity at a point approximately on the center line of the turbine and fifty feet upwind of the blades. A few of the indications are blade angle, governor speed adjustment, generator output, turbine speed, coning angle, various oil pressures and temperatures. These instruments not only allow the operators and test engineers to know what the unit is doing even though they are on the ground and several hundred feet from the tower, but also provide a means for recording simultaneously all conditions of a test. This is done by an electrically driven motion picture camera which takes pictures of the entire panel continuously whenever the unit is in operation. These films are later projected on a screen and the readings of the various instruments tabulated and test computations made. An elaborate instrument panel like this would not be required on a production unit.

From the control panel, whenever there is sufficient wind, the unit can be manually started, brought up to speed, phased with the system and loaded. Conversely, of course, the unit can be stopped. Normally, however, all this is done automatically as a function of wind velocity, and the numerous relays, etc., mounted to the right on the larger panel are for this purpose. A 125-volt storage battery provides the basic power for these controls. The right view also shows W. A. Bagley, Switchgear Expert of the General Electric Co., New England District, conducting an Operators' Instruction Class.



PARTIAL SHOP ASSEMBLY showing turbine shaft and outboard roller bearing, oil head, Woodward governor and pump, pressure tank, hydraulic motor and yaw gears all mounted on pintle girder and platform which is mounted on and swings about the top of the tower.

Kurvin Strayer Designs New Turret Ring Gauge

About a year ago, Mr. Kurvin Strayer designed a special gauge for sizing the ball races on tank turret rings. He described this gauge in the September issue of the magazine, *Machinery*. His explanatory article appears on the following page.

A request for more information, including drawings, was received from England through the British Purchasing Commission. A reproduction of the letter of appreciation from the Commission together with one from Beauchamp E. Smith, President of our company, is included in this issue.

Kurvin Strayer began his career with our company as a machinist apprentice in 1909 at the age of seventeen. After completing his apprenticeship in 1913, he worked as a machinist until 1916 with the Henry Millard Henry Company in York. From 1916 to 1921 Mr. Strayer again worked for our company. Between 1921 and 1924 he was a machinist at the York Ice Machinery Corporation. He has been with our organization continuously since 1924.

From 1924 to 1932 Mr. Strayer was foreman of the then active Governor Dept. For the following four years he was in charge of the Tool Designing Dept. Since 1936 he has held his present position as General Machine Shop Foreman. In this position Mr. Strayer is the trouble-shooter for practically the entire plant. Wherever a difficult job is being performed, or wherever errors have been made, there he usually will be found trying to devise means to do the job or salvage the spoiled material.

KURVIN STRAYER, General Machine Shop foreman, and the gauge he designed for sizing ball races of tank turret rings.

BRITISH MINISTRY OF SUPPLY MISSION
FORMERLY
BRITISH PURCHASING COMMISSION
P. O. Box 680, Benjamin Franklin Station
Washington, D. C.

RECEIVED S. MORGAN SMITH CO. MAY 8 '43

April 29, 1943

Our ref: S.D.III/906-23.

S. Morgan Smith Company
York, Pa.

Attention: Mr. K. A. Strayer
General Machine Shop Foreman.

Gentlemen:

Gun Turret Ball Race Gauge

I am pleased to inform you that the drawing of the pot and gauge for gun turret ball races has been received in England, and I have been asked to express the thanks of the Ministry of Supply for the information which you have so kindly supplied to them.

Yours sincerely,

L. E. CARR
Principal Technical Officer.

LEC:MJJ.

S. MORGAN SMITH COMPANY
MANUFACTURERS OF
HYDRAULIC TURBINES
VALVES
YORK, PA.

May 4, 1943.

Mr. K. Strayer,
General Machine Shop Foreman,
S. Morgan Smith Co.,
York, Penna.

Subject: Gun Turret Ball Race Gauge.

Dear Kurvin:

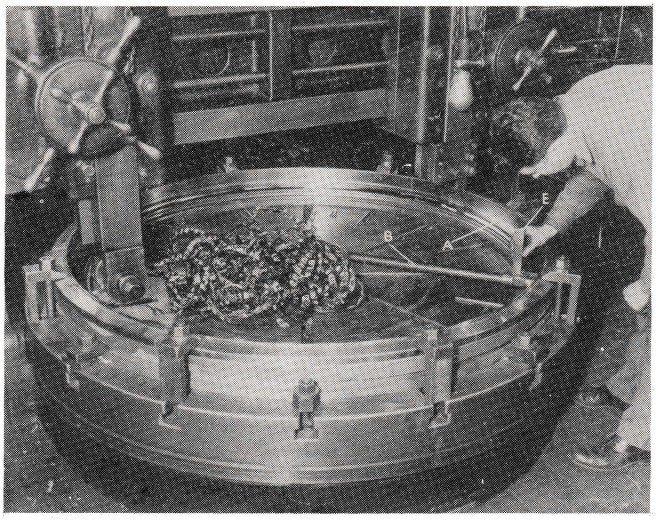
Attached hereto I am sending you original copy of a letter received from L. E. Carr, Principal Technical Officer, of the British Ministry of Supply Mission, advising that the drawing of the pot and gauge for gun turret ball races has been received in England that the Ministry of Supply desires that their thanks be expressed to you for this information. I thought probably you would like to have this original letter for your personal file, so we are keeping a photostat for our company records.

This gauge which you developed has been a great help in the production of these important tank parts and you should have this letter as a reminder of this particular contribution on your part to the war effort.

Sincerely yours,

President,
S. MORGAN SMITH COMPANY.

BES-AB
Enc.



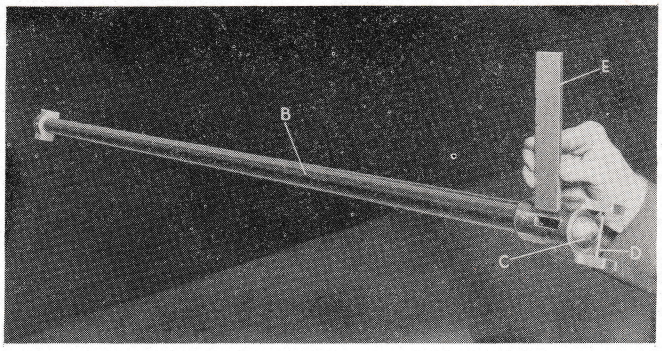


FIG. 1, LEFT: Method of using gauge.

FIG. 2, ABOVE: Close-up of gauge.

BY KURVIN STRAYER

Approved for Publication by the War Department

The machining of the ball races in turrets for tank, anti-aircraft or other guns mounted on revolving turrets requires considerable skill and extreme accuracy with respect to dimensions, in order that the mating races will fit properly when assembled. As the ordinary machine shop gauges cannot be employed on this job, the attainment of the required accuracy is a difficult matter.

In order to facilitate the sizing of ball races on a large quantity of tank turret rings, the writer designed and put into use a special floating ball type gauge which is now giving satisfactory results. This gauge is described and illustrated here with the hope that it can be put to good use by the many manufacturers now engaged in the large-scale manufacture of similar rings.

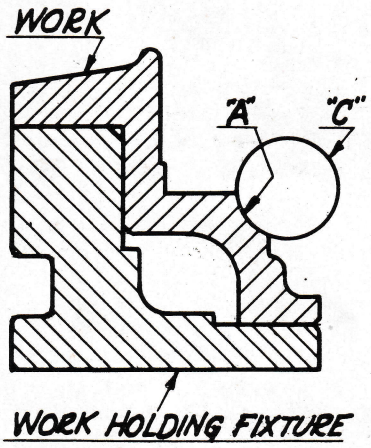


FIG. 3: CROSS-SECTION of ball race and fixture shown in Fig. 1.

The gauge, which is shown in Fig. 2, is used in the finishing operation on the lower turret ring ball race in the manner indicated in Fig. 1. The basic purpose of this gauge is to give the operator a simple means of machining the 1¼-inch radius groove at A, Figs. 1 and 3, to the exact diameter and height. The gauge-bar B, Figs. 1 and 2, is made of 1-inch extra heavy pipe, the ends being turned to receive the fork-shaped fittings. These fork fittings are milled to allow a 1¼-inch ball to come in contact with the groove at the proper elevation. The ball at the far end from the hand, Fig. 2, is pressed against a seat in the end of the pipe or bar B. The 1¼-inch ball C shown below the hand is free to move in and out, but is prevented from falling out by a ⅛-inch round pin D between the side pieces forming the fork. The stepped gauge E is inserted in the rectangular slot to move ball C outward against the work, so that it will seat perfectly in the raceway or groove A, as indicated in the cross-section view of the race and fixture, Fig. 3.

The gauge, in being applied, is moved back and forth in the plane of the race until accurately located in the central position. Gauge E, which is stepped in increments of 0.005 inch, beginning with 0.980 inch and terminating at 1.000 inch is now inserted in the slot. If the smallest step on the gauge just passes through the slot, it is obvious that the diameter of the race A must be increased 0.020 inch by further machining, since this step is 0.020 inch smaller than the step of the gauge which gives the size desired. With this small amount of 0.020 inch of material left to be removed, the operator might easily remove too much material if means were not provided to show when the groove has reached the required diameter. For this purpose, a dial indicator is clamped to the cross-rail of the machine with its spindle against the saddle. Then, on resuming the machining operation, the indicator reading is followed closely and is used as a guide in removing the amount of material required to obtain the finish size.

With slight alterations or the elimination of the fork ends, the type of gauge described could be used in performing boring operations on cylinders, etc., and in determining the amount to be removed when the sizes are beyond the range of inside micrometers ordinarily available.

V ◇ ◇ ◇ = MAIL

At last I'm getting around to writing that letter for the company paper. I really did plan on doing it a long time ago but just couldn't get around to it, so please forgive me.

I haven't had an opportunity to visit the shop for quite some time, but expect to do so in the near future. I've been wondering what the female employees are doing now that you have only old decrepit men and young boys working there. (I know I'll hear something from the boiler shop on that.)

Just got the first edition of "Turbine Topics" and wish to congratulate you on turning out such a swell job. I must admit I expected to see just a few sheets of mimeographed paper and when I say I was amazed upon receiving the first copy it is not an understatement.

By the way I wish to contest a statement made in your first edition which stated, quote, "Sgt. Ira McHenry of the Production Dept. is said to be the most extensive traveler in the Armed Services from S. Morgan Smith Co.," unquote. When I first enlisted in the Army back in 1938 I was first sent to Ft. Slocum, N. Y., from Ft. Slocum to Brooklyn Army Base, from Brooklyn to Charleston, S. C., from Charleston to Panama, from Panama to San Francisco, from San Francisco to Honolulu, from Honolulu back to San Francisco, from San Francisco across country to New York and home. When I again entered the Army in April 1942, I was first sent to New Cumberland, from New Cumberland to Camp Lee, Va., from Camp Lee to Holabird Ord. Base, Baltimore, from Holabird to Governor's Island, N. Y., from Governor's Island to Hartford, Conn., from Hartford to Framingham, Mass., from Framingham to Saco, Me., from Saco back to Hartford, from Hartford to Ft. Story, Va., from Ft. Story to Camp Somerset, Md. Now if that doesn't top McHenry's travels I'll eat the next issue of Turbine Topics. RAY KETTERMAN.

P. S.—At present I have no snapshot to send you.

P. S.—Jr. Give my love to all those lovely female employees you've hired since I left there.

I received your check today and I greatly appreciate it. It all helps when you're married and only receive $50 a month.

The Army is still OK but I miss everything back home. I'll be one of the happiest fellows alive when this nightmare is ended. Some of the fellows in my barracks think that it won't take very long. I surely hope so anyway.

John Bollinger is in the same battalion that I'm in, but not in the same battery. I think he is in the barracks right across from mine. There are plenty of fellows here from York, so I have plenty of company.

This is a pretty big camp. I think one of the largest in the country. It is located on Cape Cod about 65 miles from Boston. I guess the location of the camp is the reason why it's so darn cold and windy. There was ice on the water this morning.

So long,

BOB KRESSLER.

P. S.—How are those bums over in the Weld Shop?

P.P.S.—The paper is very nice. Congratulations.

Sorry I could not write sooner, but I have been so busy that it is almost impossible to get a letter finished around here. And in the second place you can't write your middle name or they cross it out so what is there to write about?

I received the "Turbine Topics" today and boy it really was a success. I'm glad because that was really a big thing to put over. Only sorry I couldn't give them more support.

You asked how my V notes are coming through. Well, they couldn't be coming any better than if you were to hand them to me in person. So you can see they are always here about the same time each month.

Your old pal and fellow worker,

"Jackson"

WALTER J. AVIS F 2/C

Received both of your "V" notes and also the first issue of the company's newspaper. I want to thank all of you for the "V" notes because they really come in handy. I think the newspaper is swell and it sure was good to see the faces of the gang. Say hello to everyone for me and keep the war work a-rolling. My wife sent a photograph to the shop and I hope it will serve the purpose. I am awaiting shipment for school and as soon as I go I will send my new address. The Army is OK but I believe I would sooner be working back at good old Smith's. Thanking you again, I remain,

Yours truly,

PVT. ROBERT SPONSLER.

I received the issue of the company publication and was very glad to read it and may I say proud of it although I played no part in making it a success, except for a picture, which certainly couldn't have. I am not kidding when I say that I think I have read every word of it and proudly showed it to the rest of the boys.

The "V" note came at a very appropriate time, right before pay day. I wish to thank everyone who is responsible for it. I think all of us boys sure do appreciate it.

I have entered my name in the special service branch of Army schools to take up shop math, blueprint reading and drafting for a few hours per week in my time off, and as soon as they get started I suppose I will be going to school once more. I suppose it can go to my credit on my apprenticeship, but either way, it can't do any harm.

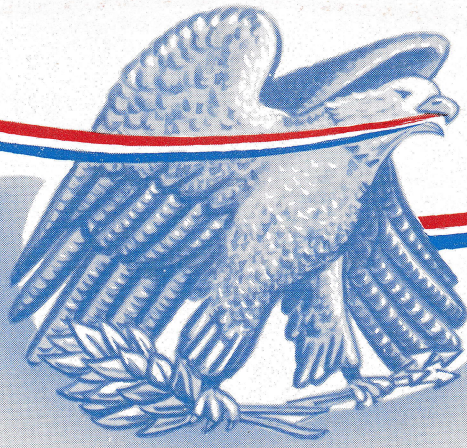
When, and if, I get another furlough, I am looking forward to another visit through the plant. I sure did enjoy the last one. It was good to see and talk to all the boys and see the improvements that were made.

Down here every day is very much like the one before it, all very warm, with plenty of work and not much play, but I guess you back home are also pretty busy. Well, just keep that way and let's try to see that this --- war is over as soon as possible so we can also be home. It's funny that home used to be a place where one went when there wasn't anywhere else to go, but there are lots of other places to go now, but home is the one place where we all want to go.

Well, none of that sentimental stuff, I guess it's time to quit. Here's wishing for a quick victory.

As ever,

SPURGEON CRONE.



HONOR ROLL

For Employees of S. Morgan Smith Co.

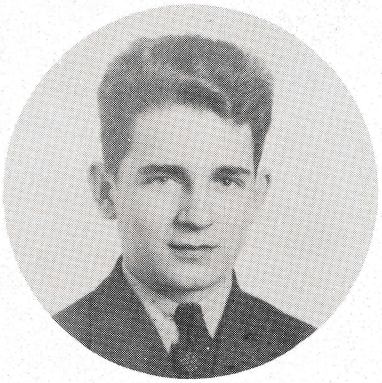
Who Have Joined

THE ARMED FORCES

R. ADREON	C. MOWERY	G. KOHLER	J. McSHERRY
C. ANSTINE	W. MUSSER	L. LIGHTNER	D. REID
J. AVIS	I. McHENRY	J. McHENRY	N. VanHORN
W. BAILEY	C. RAIFSNIDER	R. MYERS	L. FISHEL
W. BAIR	K. REEVER	W. SENFT	R. SPONSLER
E. BAKER	H. STRAYER	J. SHAFFER	J. BOECKEL
M. BIEVENOUR	J. STROBECK	J. DELLINGER	J. BOLLINGER
S. CRONE	G. WECKER	A. WELTY	A. BORING
G. DRESCHER	C. WILT, JR.	J. ROWE	M. GLADFELTER
C. HOKE	C. CUNNINGHAM	R. SPRENKLE	R. RAUCH
R. KETTERMAN	F. KINLEY	W. TEST	C. RUDACILLE
H. LEIBENKNECHT	R. McWILLIAMS	H. ELICKER	R. KRESSLER
C. MEISENHELTER	G. WINAND	W. BENNINGTON	D. SNYDER
R. MEISENHELDER	E. CUSTER	K. HEINDEL	P. SMITH

KEEP IN CONTACT—WRITE TO THEM OFTEN

SEE PERSONNEL OFFICE FOR ADDRESSES



Pvt. Paul Smith

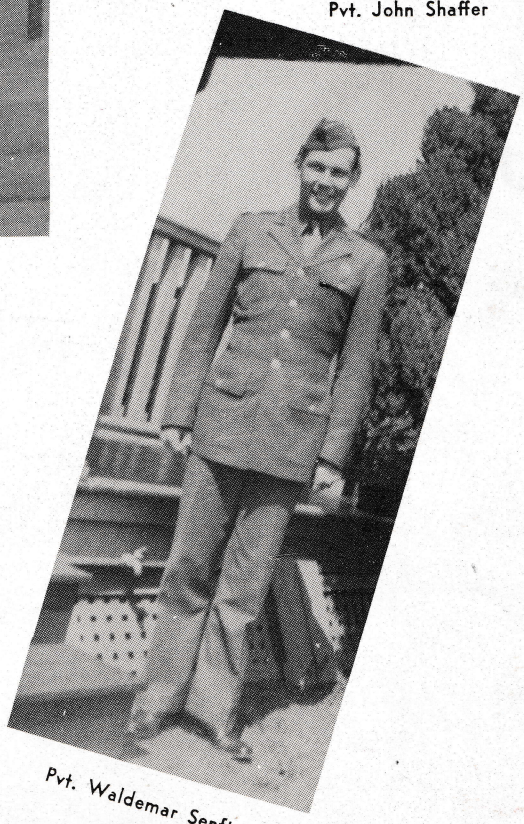
Pvt. Harry Elicker

Pvt. John Shaffer

A.C. Jack McHenry

Kenneth Heindel, Musc. 2/c

Richard Rauch, A.S.



Pvt. Waldemar Senft

V ◇ ◇ ◇ = MAIL

I want to thank you and all the members of the committee for sending me the first volume of your magazine. I think it is a great magazine for the employees and also for the boys who have left the shop for the service. It makes you feel that you aren't so far away from your friends and work after all.

I think the pictures of the boys in the service and their letters is a grand idea. There were things there about the boys that I would not have known if it were not for this magazine. "Turbine Topics" shows the spirit of the folks on the home front and the boys in the service. This is a good feature and I wish the magazine all the success in the world.

I am very sorry that I could not get a picture and letter in for the May edition. The picture I was going to send got lost somehow so I had to have another taken.

I started flying this Monday and it sure is a lot of fun. My lesson for today was take-offs, landings, stalls and spins. The spins and power stalls sure give you a thrill. The country sure looks beautiful from about three thousand feet high. I will probably finish my course here about the last of May. I will then go to Santa Ana, Calif., for about a month and then be sent to another post.

Just this week I have had a little time for myself. They sure rush you in your schoolwork. We have math as our only class subject, but we have all kinds of things to learn about aviation. When you are flying you have so many things to watch and think about. We have a good time with it all though. Hope to hear from you and all the rest of the gang.

One of the boys,

H. JACK McHENRY.

I received your letter today at the hospital in San Francisco. I thought they would perform plastic surgery on my eye that was burned, but they changed their mind. Thanks lots for money order, much appreciated, and will send you picture as soon as I get to camp to get them.

Yours truly,

PVT. CLAIR CUNNINGHAM.

You fellows are really on the ball. You'll probably never realize how much you are helping me in the service. I sure do appreciate all S.M.S. Co. is doing. Thank you all (southern) for the $5 money order which is the second one I received. It sure will help to fill the gap between pays although the amount of time we get for spending isn't what you could call excess. We fellows will probably appreciate this basic if we go across the pond, but don't try to tell us that now.

Your "Turbine Topics" is a big success. Keep up the good work. I believe I got a punch of home sickness by just seeing the cover, but after reading and looking for uncounted times I felt good. It sure was complete and in the groove in every respect. What I can't understand is why spoil it all by inserting my mug.

How are all the Levi's in the Cost Dept.? Seems like I jumped out of the frying pan into the fire when it comes to change in work. My work is very similar to what I was doing only it isn't I.B.M.

No, I'm not papa yet, but remember all good things take time except war. That takes time and it's bad.

This could go on indefinitely, but since I sleep in the room in which I'm writing, and on a broken cot, I'd better roll my pants up and wade over to it.

Getting serious again, I sure do thank you and hope to see you and the gang real soon (some year), so until then I'll say so long for now and good luck to all.

Sincerely,

HARRY ELICKER.

I received your magazine and enjoyed it very much. I also received your money order. Thanks a lot.

Looking through the booklet and reading and seeing pictures of people I know over there makes me feel as though I were right there. I'm sorry I didn't write sooner, but we have little time to ourselves.

I also subscribed for a $10,000 insurance policy, but I didn't get any receipts or anything, and I think I'll pay that myself. I feel as though I got more than enough from the shop for the time I worked there. So I'll say thanks again and close.

An ex-employee,

BOB BOECKEL.

I have off until bedtime tonight, so I thought I'd write. I'm sorry I didn't write sooner but I was busy and also waiting to get my picture taken. I'm afraid you'll have to wait awhile for a picture, as I don't have time to go up to the photography shop, which is about a mile and a half away. However, when I get them taken, I'll see that you get one right away.

When I worked down at Smith's I put in ten hours a day. Up here we start at six in the morning and usually quit at seven or eight o'clock in the evening. Tonight for once we quit at 5:30 and I have time to write some letters. Starting this week-end we get week-end passes. Some of the guys from Pennsylvania are going to try to go home, but I don't think I'll try it. I lost about ten or fifteen pounds since I've been in the Army and I feel a lot better than I did at home.

I received your "V" note two days ago and I want to thank you and the men in the shop for it. We got paid on the last day of April and I really don't need it yet. But I guess I will by the end of the month. I drew thirty dollars for my first pay in the Army and I had to come to attention and salute before I got it.

I am going to try to get a three or five day pass some time about June 15 since my brother comes home on furlough from Oregon about the same time. If I get it, you can bet I'll be around to see all of you. I received the company magazine and think it is a fine booklet. The name really fits it to a T and I think the news is arranged nicely. It was sure good to read something from some of the other fellows in the service.

By the way, give my address to the guys on Sam's floor and tell them I said they are to write. How's the new building coming along? I'd like to be there when it's completed to see just what it looks like. Did anybody else from the shop leave this month for the service? Well, it's eight-thirty and I have to write to my mother yet before the lights go out, so I'll close for now and thank you again for both the "V" note and the magazine. Lots of luck to the company and the newspaper both.

PVT. AUSTIN BORING.

UP and DOWN the AISLE

A daughter, Linda Elaine, was born to Cpl. Harry M. Elicker, Jr., and his wife, Sunday, May 2. Harry was formerly a clerk in the Cost Dept. He is the nephew of Elsie Elicker, our chief telephone operator.

* * *

Fire Chief Ed Shanabrough held an important meeting of the company Fire Brigade on Tuesday night, May 11, on the second floor of the Shop Office. The increasing importance of the firemen's part in plant protection was stressed, and the group discussed the anticipated tie-in with the City Civilian Defense Organization. The location and use of every piece of our fire-fighting equipment was pointed out by the fire chief on a complete tour of the plant. Those present were Marion Long, Gene Shindel, Clarence Shanabrough, Francis Bowker, Paul Miller, Wilbert Noss, William Williams, John Gosnell, William Lowder, Edgar Kinley, Charles Eppley, Ernest Stokes, Jacob Gross, Carl Stump, Frank Popielaski, Chauncey Slenker, Raymond Baum, William Kling, Everett Pierce and Edward Shanabrough.

* * *

On May 6 a bracket on the 8′ vertical boring mill in Dept. A was broken. The manufacturer of the mill promised a delivery of a duplicate within four weeks. Something had to be done to place the machine back in service as quickly as possible to keep the victory material flowing. Something was done. The management decided to make a bracket of plate steel construction. Instead of four weeks this machine was again in service within four days. Credit for this remarkable work goes to the employees of the Repair Dept., Plate Steel Dept., Welding Dept., Dept. B and Dept. A.

* * *

J. C. Stoddart, Assistant District Representative of the Pennsylvania State College Extension Service, has announced that the registration for summer night classes under the Engineering, Science, Management War Training program will be held June 7 and 8 at the William Penn Senior High School Annex, from 7 to 9 P. M. Registrations will also be accepted on the opening night of class, June 14.

Several of the courses offered will be of fifty hours' duration and will be held one or two evenings a week, as the class desires. The other courses of one hundred hours' duration will be held two nights a week, three and one-half hours a night.

Following is a list of the courses: Chemical Laboratory Techniques, Engineering Drafting I and II, Fundamentals of Electrical Engineering, Industrial Electronics I and II, Industrial Organic Chemistry, Office Supervision for Women, Industrial Organization and Management, Production Control, Time and Motion Study, Ordnance Inspection, Operations Inspection, Tool Design I and Qualifying Mathematics for Engineering Courses.

* * *

Mr. and Mrs. George Bell have joined the "Back to Earth Movement." They purchased a home near Stony Brook, where they now reside.

GONE BUT NOT FORGOTTEN

We still have the box it came in,
And memories fond and old,
But Dept. C, oh what a sin,
Has our little old trophy of gold.

We built a place and hung it up.
It shone and glistened bright.
For the second year it was our cup,
Until we faltered that Friday night.

Saturday we came with heads hung low—
Our own department joined in the jeers.
Not a word or sign to soften the blow
Or ease the hurt through the coming years.

Though the trophy has been taken,
The box remains, so remember this:
We can look at it when forsaken
And through the years reminisce.

KENNETH FREY, Dept. B.

* * *

George Hazelhurst and some friends enjoyed a fishing trip along the eastern shore close to St. Michael on Sunday, May 16.

Mrs. Leon Eisenhart entertained the girls of the Cost Dept. at her home in Manchester, at a farewell party for Mrs. Richard Kehr, who left to join her husband who is stationed with the U. S. Army at Miami, Fla. Those attending the party were Mrs. Kehr, Ethel Marsteller, Betty Foust, Mrs. Glenn Feiser, Mrs. William Nusbaum, Mrs. Robert Orwig, Martha Bender, Charlotte Kephart and Mrs. Eisenhart.

UP *and* DOWN *the* AISLE

After an illness of eight weeks, Thomas "Doc" S. Eader, Jr., died at 6:20 A. M. on April 28 at his home, 840 Florida Ave. "Doc" was born in Frederick, Md., on November 27, 1894, and he was graduated from the public schools of that city. He was employed as a draftsman in various concerns in Washington, D. C.: the Southern Railway Co., 1914 to 1918; the Bureau of Ordnance, Navy Department, and the U. S. Ordnance Co., 1919 to 1920.

On April 12, 1920, he entered the employment of our company as a draftsman. From 1922 to 1923 he worked in the Tool Designing Dept., which was above the engine room, where the Tool Grinding Dept. is now located. For about two years, he was employed by the Hanover Wire Cloth Co. "Doc" then returned to our company as a draftsman. During the years 1928 to 1931 he made numerous trips to foundries as a casting inspector. From 1933 to 1942 he worked as an estimator under the late Grant Whistler. "Doc" was working on "priorities" from 1942 to the time of his illness.

He was veteran of World War I, and a member of Co. "L," 318th Infantry, having served overseas from September 18, 1918, to June 1, 1919. He was a member of White Rose Post No. 556, V. F. W. of York, and of Washington Centennial Lodge No. 14, Free and Accepted Masons of Washington, D. C.

"Doc" was a great fisherman and interested in hobbies. He enjoyed making oil paintings, and in his spare time worked with his partner, George Klunk, of the Weld Shop storeroom, on all kinds of furniture in their shop in his garage. He was president of the York Hobby Lobby Club, an airplane spotter and an air-raid warden.

His survivors are his wife, Mrs. Anna Schlaanstine Eader, who is the daughter of George Schlaanstine of the Production Dept.; three children, Thomas S. Eader, III, Washington, D. C.; Nancy Lee and Earl Eugene, at home; his father, Dr. T. S. Eader, Frederick, Md., and five sisters, who live out of town. Funeral services were conducted on May 1.

* * *

Dan Flohr in the presence of P. J. Rees, Plant Superintendent, spied a pair of Dept. B's "V" blocks on one of the York Safe and Lock Co.'s trucks. He removed the blocks from the truck, and did not inform the driver. The driver returned to the Safe Works in time for his dinner. When he came back to his truck after dinner, he missed the blocks and reported immediately to his superior, who in turn called our plant. It was then learned that Kurvin Strayer had loaned the blocks to the Safe Works. Later in the afternoon the driver returned and picked up the blocks the second time. Rees had a chuckle, everybody had a good laugh, and was Dan's face RED!

* * *

Bette Foust, Vivian Smith and Anna Wolfe traveled to Ocean City where they visited Mr. and Mrs. S. Homer Peterson over the Memorial Day week-end. They also visited Atlantic City where they saw Gene Krupa and Teddy Powell's orchestras.

* * *

Cpl. Spurgeon Crone became the proud father of a 6¼ pound baby boy on May 20. The baby is named Kenneth Elmer. Cpl. Crone worked as an apprentice in the Plate Shop prior to his induction into the Air Corps.

Arthur F. Smith, president of the bowling league during the 1942-43 season, presided at the business meeting held at the bowlers' banquet, May 22. The secretary, Edward Rohrbaugh, read the minutes of the previous meeting, and these were approved. The treasurer's report will be posted. Nominated officers for the ensuing year were unanimously elected. They are Charles Spence, president; Charles Firestone, vice-president; Edward Rohrbaugh, secretary; Donald Thompson, asst. secretary; and Earl Meisenhelter, treasurer.

* * *

THE UPLIFT

Luther Lehr and Paul Greiman of the Receiving Dept.:

Lehr: I'm learning to be a weight-lifter.

Greiman: From the York Bar Bell Company?

Lehr: No, I take the weights off the small scales each day.

* * *

Printed above is the official signature of Gen. Yamashito, successor to the general who committed harakiri on Bataan. Yamashito was killed in Guadalcanal. The original copy of this signature was submitted to us by Edgar Kinley, Dept. A. He received it from his nephew who was one of the Marine raiders in the Guadalcanal battle area.

* * *

On May 30, at 3:50 A. M., David F. Walters, 116 N. West St., died at the York Hospital, after being a patient at the institution only twenty minutes. He suffered from a brain injury attributed to a fall at his boarding house. His death was caused by a cerebral hemorrhage. "Dave" was a sweeper in the Navy Dept. His son, David F. Walters, Jr., a welder, is on a leave of absence from our company.

Safety glasses have done it again and another eye has been saved! A sharp chip struck the safety glasses of Roland Gross and bounced off, cutting him along the left temple. Roland works in the Weld Shop.

* * *

The Easter holiday was most generous to Mr. and Mrs. Robert W. Hess. On Easter morning at 10 A. M. Robert Wiltow Hess, Jr., was born, weighing seven pounds, twelve ounces. Our congratulations to Bob, who is on the night shift in Dept. A.

* * *

One desk in the Stenographic Dept. has been noticeably vacant the past several weeks due to the absence of Lillian Lauer, who is confined to her home because of illness. Not only are many of the men lamenting the fact that she is not here to do their work in her usual efficient manner, but her countless other friends around the office have remarked how much they miss her friendly smile and greetings. Get well quickly, Lillian, we miss you and want you back with us soon.

* * *

We have received a report from Montana that Jack McHenry began actual training as a pilot about the beginning of May. He reports that some of his buddies became sick, but that he missed that part. Jack should make a good air force man—we remember him as a jolly and lighthearted fellow, "walking on air."

* * *

We extend our sympathy to Edwin Geist, Floor 3 and 4, whose wife died June 2. Mrs. Geist was the mother of Max Gladfelter, A. S., who was formerly employed in the Main Office.

* * *

The Colonel was lecturing a class of prospective officers: "A forty-foot flagpole has fallen down," he said. "You have a sergeant and a squad of ten men. How do you erect the pole again?"

The candidates thought, then offered suggestions about block-and-tackle derrick, and so on.

"You're all wrong," replied the Colonel. "You'd say: 'Sergeant, get that flagpole up!'"

* * *

Sunday, May 16, a party of fishermen consisting of Kenneth Frey, Millard Deardorff and a former employee, M. G. Baublitz, enjoyed a fishing trip along the Conewago. Kennie had great success. He caught a fifteen-inch sucker. The question in the minds of the rest of the party is which was the sucker. This was the first fish of the season for Kenneth.

* * *

Betty L. Zech, of the Production Dept. had a vacation from her office duties for a week to entertain her fiance, Sgt. Raymond Davis, U. S. Army, who returned from England for a ten-day furlough before entering Officers' Candidate School. Betty was operating a "one-girl" U.S.O. for a "one-man" Army.

About 35 engineering associates and close friends attended a dinner held on May 4, at the Yorktowne Hotel, in honor of George A. Jessop, Chief Engineer. The occasion was Mr. Jessop's sixtieth birthday anniversary. In response to a toast by Beauchamp E. Smith, Mr. Jessop reviewed some of the past history of York. Starting with the site of the present Colonial Hotel, he recalled the hotels, stores and other important establishments located near Continental Square. After the dinner, William Kurtz led the group in singing and informed those present about Mr. Jessop's early life.

A good time was had by all, and we sincerely hope that George will enjoy many more of these parties.

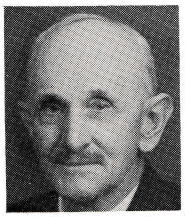
* * *

We extend our sympathy to Grant H. Voaden, an employee in our Engineering Dept., who traveled to St. Thomas, Ont., during the Memorial Day week-end to attend the funeral of his father.

* * *

Hilda Knaub's parents, who live in Edinburg, Va., enjoyed a two-day visit with her. Hilda is a clerk in Dept. B.

* * *



Edward C. Smyser, who died suddenly on May 3, at 2:30 P. M. in his home at 838 Pennsylvania Ave., was born in Dover Township on August 12, 1863. He attended the York County schools and later worked on his father's farm. In 1886 he started working on his own farm. James S. T. Strayer, our Traffic Manager, was his first hired boy. Mr. Smyser continued farming until 1911.

On April 29, 1918, he was employed by our company. Mr. Smyser started as a helper on the old 6′ planer where we planed the large gun lathe beds during the last war. His first supervisor was Abraham S. Crull. He continued as a helper in Dept. B until he retired.

The deceased was a member of Trinity Lutheran Church. Besides his widow, Mrs. S. Elizabeth Smyser, he leaves four children, Mrs. C. H. Hamme, Edinburg, Tex.; Ervin A. Smyser, Bair Station; Walter G. Smyser, Philadelphia; and Earl C. Smyser, this city; twelve grandchildren and seven great-grandchildren. Funeral services were conducted at his home on May 6.

UP and DOWN the AISLE

We wish to extend our sympathy to Elsie Whitcomb of the Stenographic Dept., whose mother died recently.

* * *

TWENTY YEARS AGO

When the entire hoisting apparatus of a six-ton crane, which they were operating, snapped from its mooring, three S. Morgan Smith Co. employees were injured and confined to the York Hospital with body contusions.

* * *

We extend our congratulations to Mr. and Mrs. Carroll L. Miller, 721 Madison Ave., upon the arrival of a son on May 11. Name, Wayne Wright Miller. Weight, 8 pounds, 6 ounces. Mrs. Miller is the former Miriam Wright. Carroll is employed as an expediter in the Production Dept.

* * *

She was only the optician's daughter—two glasses and she made a spectacle of herself.

EDITORIAL STAFF

EDITORS—Raymond A. Dietz, Elmer E. Aughenbaugh, E. Everett Pierce, Jr., Grant H. Voaden

REPORTERS—James S. A. Strayer, George T. Phillips, Lynn Sterner, William Myers, John Godfrey, Marie Holmes, Philip Wecker, John Beigh, Robert Wolf, Kenneth Frey, Joe Warner, James Decker, Walter Allison, Gene Shindel, William Kline, Theodore Hake, Reed Everhart, Charlotte Kephart, Woodrow Smith, Robert Rudacille, Walter Rohrbaugh, Arline Fitzkee, Ruth Jamison

The Hill Billy Serenaders were organized and led by Earl Jennings, a recognized master of the bull fiddle and General Foreman of the Plate Steel and Weld Shop. The co-operation he has received from his hot sparks is very gratifying, for he has succeeded in gathering together a very versatile group. These mountain dew thrillers have attracted much attention and have afforded pleasure and diversion to those who eat their noon lunch at the shop.

Millard Wherley plays harmonicas and does a song specialty of "The Old Gray Mare" in Pennsylvania Dutch. The versatile Howard Bubb plays the fiddle and a plate steel guitar, an electrically welded instrument of sheet steel which he, himself, fabricated. He also does a number of song specialties, one of them being "Popeye, the Sailor Man," sung in a low voice.

Kenneth Loucks plays the saxophone; Stewart Strine, Luther Wilt, Arthur Hartman and Abie Sterner, guitar; Harry Luckenbaugh, Earl Hottinger and Ralph Brenneman, banjo; Bill Lowder, cymbals; Reed Everhart, xylophone; Bill Enterline, electric guitar; Ed Aldinger, jew's harp and Hawaiian guitar; and on special occasions, such as the bowling banquet, Richard Jenkins plays the piano. Occasionally the ranks are swelled by other players.

Much credit must be given to Paul Stumpf, the sound technician of the group, who manipulates the recording and speaker system rented from time to time for the noon hour concerts. His energy and skill help make these occasions more delightful to the audience.

Wishing to add vocal expression to his ridge runner rhythm ramblers, Earl Jennings organized the Forge Fire Quartet. They sing such corn-squeezing inspired numbers as "Little Brown Jug," "You Are My Sunshine," "I've Been Working on the Railroad" and "Oh, My Darling Clementine." The members of the quartet, who all work in the Plate and Weld Shop, are Ethel Peterson, soprano; Chris Bell, alto; Billy Sterner, tenor; and James Strayer, Jr., basso. Other numbers suitable to the musical yen of the hill billies are rendered by the Swing and Sway Sisters, Hilda Miller and Julia Lehr, sopranos; and Bernice Gardner and Betty Becker, altos. They sing "Roll Out the Barrel," "Everybody Loves the Navy," "The Old Spinning Wheel" and "Let Me Call You Sweetheart."

LEFT TO RIGHT: Earl Jennings, Kenneth Loucks, Ralph Brenneman, Bill Lowder, Luther Wilt, Harry Luckenbaugh, Arthur Hartman, Millard Wherley, Howard Bubb, Stewart Strine and Earl Hottinger.

UNION ACTIVITIES

MEETING OF LODGE NO. 1400, I. A. M.

In an effort to assist in keeping down prices and the cost of living, the procedure issued by the Grand Lodge was adopted by the New Deal Lodge No. 1400, I.A.M., at their meeting, May 17.

Paul Flohr and Earl Smith of our company and H. D. Pressel of the York Electric Co. were appointed to carry out the instructions. They will confer with representatives from the O.P.A. District Labor Advisory Committee and secure lists of top ceiling prices of the following foods:

Packaged dried fruit, lard, coffee, processed fish, frozen fish, cooking and salad oils, hydrogenated shortening, other shortening, canned citrous fruits and juices, evaporated and condensed milk, syrups, honey, flour and flour mixes, macaroni and noodle products, peanut butter, sugar, cereals, poultry, bananas, packaged cheese, butter, eggs, fluid milk and bread.

Prices of additional products will soon be made available at O.P.A. district offices. These will be the highest legal prices that can be charged by any store in the community. A store charging more than these top ceiling prices will be unquestionably violating the law.

The committee is to check prices and the union members are to cooperate. All stores are to be included except chain stores; these are covered by O.P.A. inspectors. The posting of ceiling prices of fresh fruits and vegetables, pork, poultry and butter is to be checked.

Any storekeeper charging more than top ceiling prices will be asked to reduce them, and will be rechecked on a return visit. If on the second visit the price is still found to be illegal, a purchase is to be made and a sales receipt secured. The Price Control Law provides that a person who has been charged more than the legal ceiling price may file a suit against the violator and recover either three times the amount of the overcharge or fifty dollars, whichever is greater.

All union members and their families are requested not to buy at prices higher than those on the price lists issued by O.P.A. district offices. The committee should be informed of all violations noted, and will be able to advise as well as help to correct the situation.

Union officials are convinced that effective price control and the rolling back of prices to at least what they were September 15, 1942, must be accomplished to compensate for the "wage freeze" that became effective as of that date.

* * *

The Executive Council of the Grand Lodge of the International Association of Machinists left no grass grow under their feet in withdrawing from the A. F. of L. once the authority was granted.

In preparation for the next steps that will be taken, the council has scheduled a conference in St. Louis, June 5. The major officials of the Grand Lodge, all special lodge representatives and all district business agents, have been called to the conference.

The picture to the left is a reproduction of a charcoal drawing by Hans W. Hamm, of the Design Dept. Henry C. Wuerthner, doorman in the Plate Steel and Weld shop is the subject. Mr. Hamm is presenting the original portrait to Mr. Wuerthner.

. . . . . BOWLING BANQUET . . . . .

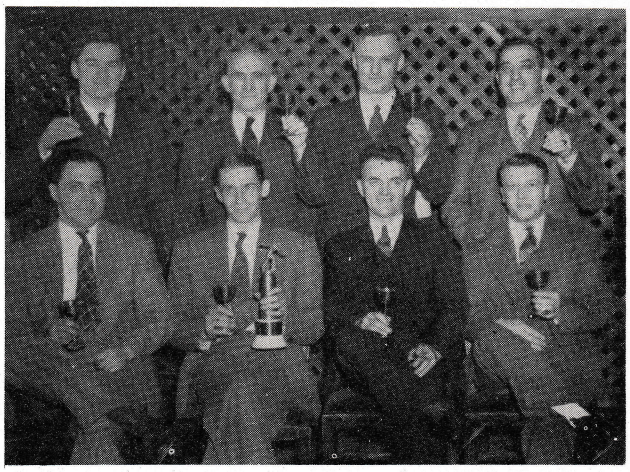
CHAMPIONS of playoff and winning team of season—Department C No. 1.

HIGH AVERAGE—151.99, Harry Fitzkee—Department C No. 1.

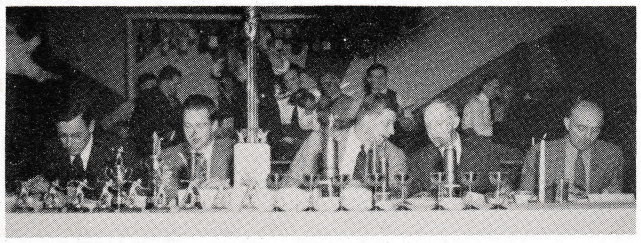
HIGH SINGLE — 244, Ernest Stokes — Shop Office No. 2.

HIGH TRIPLE — 588, Albert Gotwalt — Store Room.

MILLARD DEARDORFF with the runner-up trophy.



RUNNER-UP TEAM of playoff and second team of season—Department B No. 2.

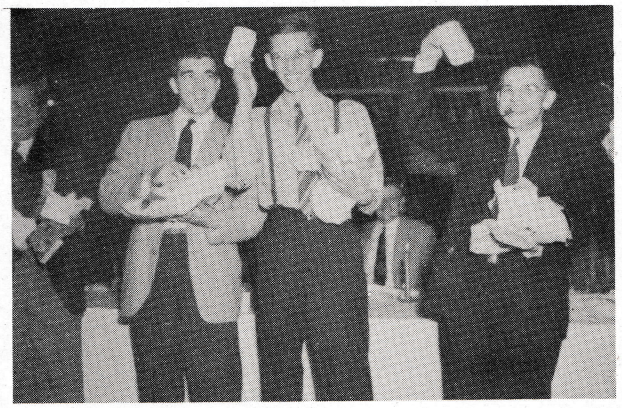


B. E. SMITH, PRESENTER OF TROPHIES, D. D. McArthur, master of ceremonies; B. B. Smith, story-teller; A. F. Smith, past president; H. E. Heilman, past vice-president.

THE HILL BILLY SERENADERS, who added that final touch to the banquet, sending out solid stuff to entertain the dining bowlers.

THE HILL BILLY SERENADERS assisted by Bill Tighe, harmonica expert and Ed Shanabrough's Hepcats. Is Whereley baptizing them and does his left hand know what his right hand is doing?

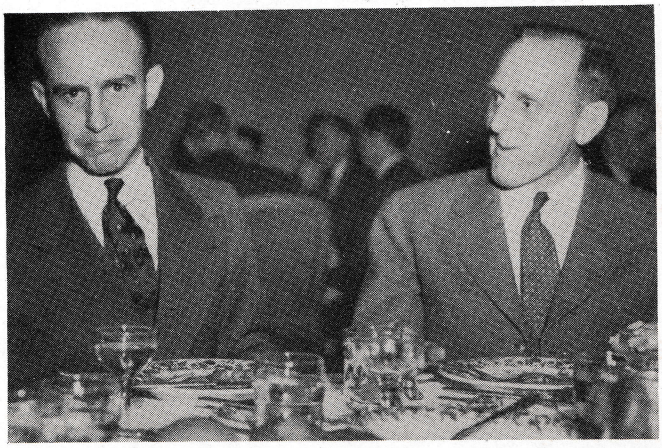
IRA ROZELL is the Wind Turbine Strong Man. These oxygen tanks weigh about 150 pounds each.



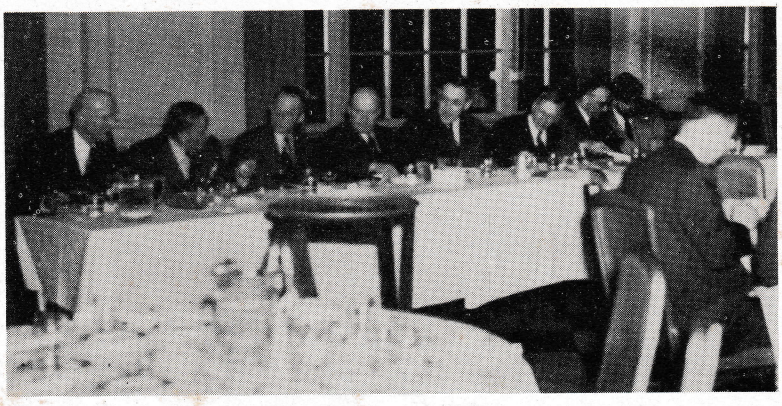
THE "TOILET PAPER" QUARTET singing "Roll Out the Barrel" at the bowling banquet.

WE ARE CURIOUS TO KNOW what Jack and Paul were eating and drinking, pickles, lemons, persimmons or vinegar (?) Maybe it's just ants in their *pants.*

FORGE FIRE QUARTET: Ethel Peterson, soprano; Chris Bell, alto; William Sterner, tenor; and James Strayer, Jr., Basso. Their singing is greatly appreciated.



E. P. HAMILTON, who lives at the site and looks after the anemometers, and Wind Turbine mascot, "Curly."



THE SPEAKERS AT GEORGE JESSOP'S BIRTHDAY PARTY, left to right, Phil Aldinger, James S. T. Strayer, William Kurtz, George Jessop, Beauchamp E. Smith, Fred Dempwolf, Bob Spangler and Burwell B. Smith.

CRONIES of George Jessop drinking to his health for the Nth time: Phil Aldinger, Jim Strayer and Bill Kurtz.

SWING AND SWAY SISTERS: Hilda Miller and Julia Lehr, sopranos; and Betty Becker and Bernice Gardner, altos. Give us more of the same kind of singing, girls.

A DUET by Shanabrough and Wherley, "Was it lousy, and don't do it again."

DESIGN DEPT. EMPLOYEES.

Happy Birthday

June 5—A/C Norman Van Horn
June 6—Clyde Miller, Floor No. 1
June 7—Cpl. Frank Kinley
June 10—Lester Pottorff, Dept. B.
June 15—Gordon Drescher, MM 2/c
June 26—Pvt. Raymond Myers

Greetings . . .

We extend a hearty welcome to the following new employees:

John H. Baublitz, Plate Steel; L. Kenneth Loucks, Jr., Weld Shop; Harry D. Boyer, Dept. B; John W. Worley, Dept. C.; Emma Catharine Miller, Dept. C.; Phyllis Mundis, Dr. Room; Harold S. Perry, erector on Wind Turbine project; and Phyllis B. Hoke, Stenographic Dept.

PROBLEM OF THE MONTH

A spiral runs around a column five times from the base to the top. The column is 200 feet high and 16' 8" in diameter. How long is the spiral? The answer will be given next month.

HURRAH FOR THE VICTORY GARDENERS!

Harold Miller thinks he planted his red beets upside down, since three weeks have passed and they aren't through yet.

Hen Knotts has peas that grew 12 inches in one week, and they are the size of watermelons now.

Willis Young had lovely watered tomato plants during the heavy downpour the other week.

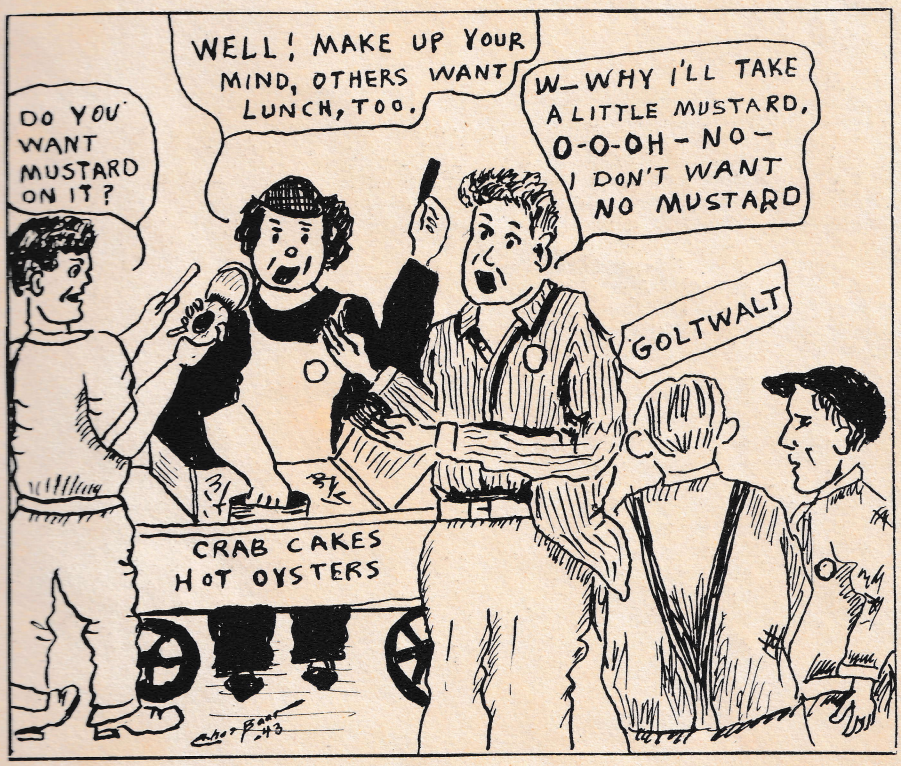
Paul Greiman is trying to interest people in planting mixed vegetables with ground tin cans so that the food grows already canned.

Luther Lehr is trying to raise lima beans like his neighbor. He says they grow three feet long to the pod, are nine inches across and he says you slice to fry them, like egg plant.

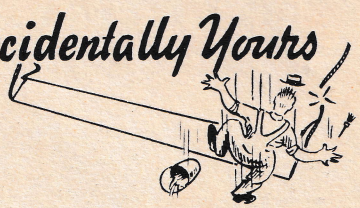
⊙ ⊙ ⊙

"With a single stroke of the brush," said the teacher, taking the class around the Corcoran Gallery in Washington, "Sir Joshua Reynolds, the famous painter, could change a smiling face to a frowning one."

"So can my mother," said a small boy.


WELL! MAKE UP YOUR MIND, OTHERS WANT LUNCH, TOO.
DO YOU WANT MUSTARD ON IT?
W—WHY I'LL TAKE A LITTLE MUSTARD, O-O-OH - NO— I DON'T WANT NO MUSTARD
GOLTWALT
CRAB CAKES HOT OYSTERS

Accidentally Yours



WEIGHT-LIFTERS!

One of the outstanding causes for accidents in our plant is the improper lifting of material. When lifting material by hand several simple rules should be kept in mind.

If the weight of an object is in excess of fifty pounds a worker is not expected to lift it without assistance. Another worker can be asked to help or else mechanical lifting equipment such as a hoist or a crane must be used. When the load to be moved weighs less than fifty pounds and is going to be moved by hand, care should be taken to follow the correct rules of lifting. Back strain and hernia are likely to develop if workers bend at the waist when leaning over to pick up a heavy or irregular object. All workers should lift by bending at the knees and using the leg muscles—not just the muscles of the abdomen and of the back. Also when lifting it is well to take a deep breath and to hold it until the load is up in a comfortable position. This will make the muscles taut and less liable to injury.

It is important that all injuries, no matter how slight, be reported immediately to the nurse. If a hernia resulting from lifting is not reported within 24 hours, it is not compensable.

* * *

ANSWER TO LAST MONTH'S PROBLEM

Since any combination of whole numbers (using all the digits between 0 and 9 once only) will give a multiple of 9, it is necessary to include fractions in the answer. One solution is $21\frac{3}{6}$ plus $78\frac{45}{90}$. Many other solutions can be found, but they will all contain fractions.

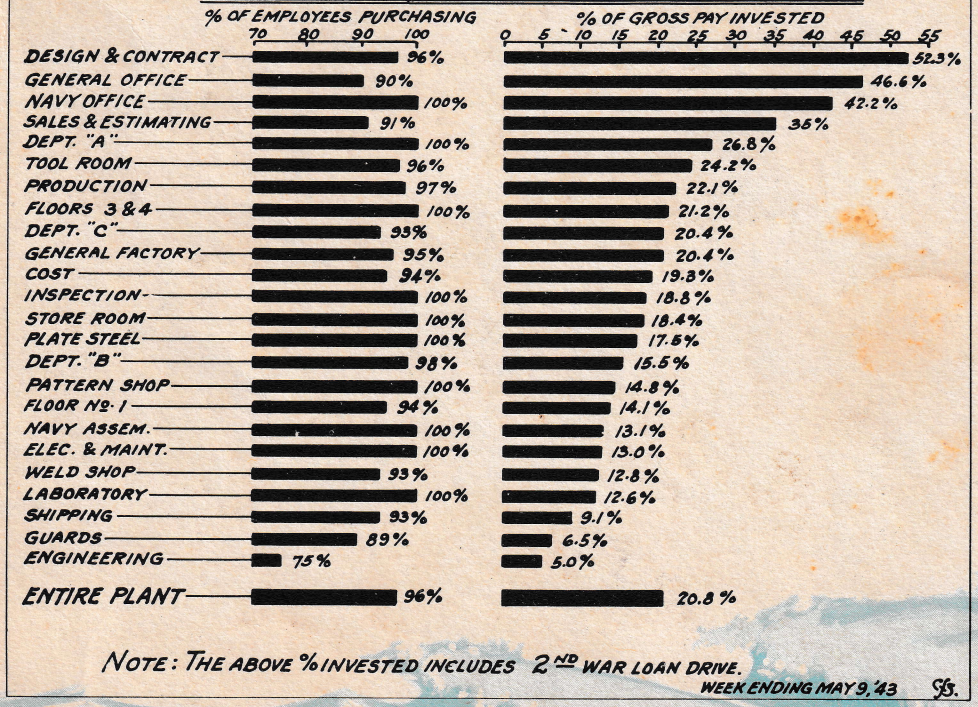
Keep Up The Good Work

TO THE MEN AND WOMEN OF THE
S. MORGAN SMITH CO.
FACTORY DEPT.
YORK, PENNA.

I AM GLAD TO HEAR THAT THE MEN AND WOMEN OF S. MORGAN SMITH CO. FACTORY DEPARTMENT ARE NOW PARTICIPATING IN THE PAYROLL SAVINGS PLAN WITH ALLOTMENTS FOR WAR BONDS AVERAGING OVER 10 PERCENT OF THEIR PAY. THIS IS A SPLENDID ACCOMPLISHMENT. I CONGRATULATE THE COMPANY, ALL ITS WORKERS AND SUCH ORGANIZATIONS OR ASSOCIATIONS AS HAVE HELPED TO REACH THIS HIGHLY PATRIOTIC GOAL. PLEASE EXPRESS MY THANKS TO ALL WHO HAVE HELPED.

HENRY MORGENTHAU, JR.,
Secretary of the Treasury, 843A.

WAR BOND PURCHASES BY DEPARTMENTS.


% OF EMPLOYEES PURCHASING
70 80 90 100
% OF GROSS PAY INVESTED
0 5 10 15 20 25 30 35 40 45 50 55
DESIGN & CONTRACT 96% 52.3%
GENERAL OFFICE 90% 46.6%
NAVY OFFICE 100% 42.2%
SALES & ESTIMATING 91% 36%
DEPT. "A" 100% 26.8%
TOOL ROOM 96% 24.2%
PRODUCTION 97% 22.1%
FLOORS 3 & 4 100% 21.2%
DEPT. "C" 99% 20.4%
GENERAL FACTORY 95% 20.4%
COST 94% 19.3%
INSPECTION 100% 18.8%
STORE ROOM 100% 18.4%
PLATE STEEL 100% 17.5%
DEPT. "B" 98% 15.5%
PATTERN SHOP 100% 14.8%
FLOOR No. 1 94% 14.1%
NAVY ASSEM. 100% 13.1%
ELEC. & MAINT. 100% 13.0%
WELD SHOP 99% 12.8%
LABORATORY 100% 12.6%
SHIPPING 99% 9.1%
GUARDS 89% 6.5%
ENGINEERING 75% 5.0%
ENTIRE PLANT 96% 20.8%

NOTE: THE ABOVE % INVESTED INCLUDES 2ND WAR LOAN DRIVE.
WEEK ENDING MAY 9, '43 SS.